

## ABSTRACT OF DISCLOSURE

The present invention aims at providing a multicarrier transmitter capable of processing complex information as send data. A multicarrier transmitter according to the invention  
5 includes: a signal point mapping unit 105 for performing symbol mapping of a series of information; a serial-to-parallel converter 106 for converting serial data as the symbol mapped series of information to parallel data; a first inverse wavelet transformer 102 including a plurality of real coefficient wavelet  
10 filters orthogonal to each other; the first inverse wavelet transformer performing a first wavelet transform on the parallel data; a second inverse wavelet transformer 103 including real coefficient wavelet filters different from those of the transformer 102; the second inverse wavelet transformer  
15 performing a first wavelet transform on the parallel data; and a modulator 107 for performing SSB modulation by using the output from the transformer 102 as an in-phase signal of complex information and the output from the transformer 103 as an  
20 orthogonal signal of complex information.